

## Book Reviews

**SKELETON KEYS: AN INTRODUCTION TO HUMAN SKELETAL MORPHOLOGY, DEVELOPMENT, AND ANALYSIS.** By Jeffrey H. Schwartz. 1995. New York: Oxford University Press. 362 pp. ISBN 0-19-505638-8 \$49.95 (cloth).

It takes courage to develop a new introductory textbook to the field of human osteology, where the volumes of Bass (*Human Osteology*), White (*Human Osteology*) and Steele and Bramblett (*The Anatomy and Biology of the Human Skeleton*) are already entrenched in various teaching programs. The Schwartz volume, available only clothbound, is somewhat less expensive than White's (currently priced at \$69.00) and more expensive than Bass's (paperbound at \$25.00) and Steele and Bramblett's (paperbound at \$29.50).

In his Preface, Schwartz expresses his desire to bring originality to the study of human osteology, to stress variation (through the use of multiple specimens for his figures) and to "put morphology into a developmental and ultimately, systematic context" (p. v). His goal is to avoid the cookbook approach and to put the topics of sexing, aging, non-metric variation, and anthropometry into a broader context.

The first half of the book is devoted to a descriptive osteology of the skeleton, organized into regions (the skull, the postcranial axial skeleton, the upper limb, the lower limb). A developmental approach is utilized with adult morphology compared to bones from a third-trimester fetus. As the author notes in the preface, this section resembles a *Gray's Anatomy* of bones. For the skull, additional subadult specimens are pictured (fetal skulls at 6, 7, 8 months; neonate, 3 months, and 5 years). Inclusion of subadult skeletal remains is helpful, since prehistoric skeletal samples and modern forensic case-loads include considerable numbers of individuals who have not reached maturity, although rarely does the osteologist encounter fetal remains in either application. Addi-

tional subadult illustrations of the postcranial skeleton would have been even more beneficial, because the period from birth through adolescence is central to analytical practice.

Line drawings illustrate the descriptive osteology portion of the book. The author utilized 8-14 specimens of each skeletal element in an attempt to incorporate variation as a normal facet of morphology. Thus, each figure is a composite and does not necessarily reflect a real bone. The positive side of this approach is that the artist can emphasize certain features to enable the student to correctly locate them on the bones. For example, the long bones are drawn with fairly rugged ridges for muscle attachment, the features thus clearly depicted. However, in some cases this composite approach is confusing, such as in Figure 5-1 where the preauricular sulcus (a female trait) is noted on a hipbone which has a distinct male morphology in the pubic region. Also, a scale would be helpful for many of the figures. The illustrations of the adult bones are generally reduced, whereas the figures of the fetal bones are enlarged; when both are located on the same page, the beginning student may have difficulties with the perspective. In addition, the small size of certain of the figures of the adult bones lends itself to errors in feature identification. For example, in Figure 5-1 the location of the pubic tubercle is incorrectly placed at the symphysis, whereas it should be located laterally and an actual bony knob should be indicated. With respect to the illustrations, some errors escaped proofreading (e.g., in Figure 2-1 the external occipital protuberance is called the mental protuberance).

The descriptive osteology of the skeleton is followed by a chapter on dentition which covers anatomy, development, and identification techniques. Several dental variations are illustrated using good photographs of actual specimens. It is interesting to note that proportionally this chapter is extremely heavily referenced, with 31% of the volume's bibliography devoted to dental citations.

The three analytical chapters reflect a nontraditional approach: "Aging"; "Pathology; Disease, Trauma, and Stress"; "Differentially Expressed Morphological Character States: Nonmetric Variation, Race, and Sex Determination." Here we see the author attempt to bring some originality to the study of human osteology. I found the organization contrary to the logical analysis of skeletal remains. When dealing with adult skeletal remains, the common technique is first to determine the sex. Sex determination is necessary in order to estimate an accurate age range for the individual, and may be helpful in the assessment of pathology. In this text, however, sex assessment is treated almost as an afterthought and placed at the end. The author offers "the introductory student many cautionary remarks, some trait lists, and some discriminant functions but no guidelines as to basic procedures for sexing. In the final paragraphs of the book he states that "... a few pelvic and mandibular features attributable to sexual dimorphism appear reliable in distinguishing females from males in any population of *Homo sapiens*" (p. 290). The subject is then dropped—leaving the student without a clue about what these features may be.

The chapter on aging has some serious flaws. In general, Schwartz stresses the older aging literature or recent sources based on the Hamann-Todd sample, the latter reflecting the skeletal biology of people living in the last half of the 19th century or beginning of the 20th century. He does not appear to be familiar with the vast literature on aging and in some cases may not have read the primary sources he quotes. On page 194 Schwartz declares that "... McKern and Stewart only analyzed one end of each long bone." In fact, McKern and Stewart's comprehensive study of the repatriated Korean War dead clearly covers the distal and proximal end of each long bone (Chapter III in their report). Schwartz also states that the sample Todd used for the pubic ages was entirely male (p. 195). In reality, Todd studied both sexes and the female data are presented in a 1921 article in the *American Journal of Physical Anthropology*, published soon after the article on the male. From a forensic point of view, the author's omission

of the more recent age data on epiphyseal union, cranial suture closure, and pubic metamorphosis from the Department of Coroner, County of Los Angeles, could cause legal problems in identification. Older aging standards from the Hamann-Todd sample are not applicable to modern populations, and failure to accurately bracket the age of an unidentified person may well result in that case remaining a John Doe. With the large number of missing persons in the U.S. and a dependence on the computer for tracking data cross-country, the age field is a key variable in identification. An introductory student will not be involved in these legal dramas, of course, but any forensic pathologist drawing exclusively upon this text will be in trouble. There are also problems with the illustrations in this chapter which add to the difficulties in application. Figure 7-2 (showing pubic symphyses) and Figure 7-3 (auricular surface of the ilium) are small and do not adequately show the distinctive bony features. In contrast, the sternal rib ends are enlarged but some of the details are incorrect (e.g., scalloping is shown on a Phase 5 rib).

The chapter on pathology is fairly straightforward. Those pathologies resulting from developmental, endocrine or nutritional disturbances are discussed in the first part of the book, leaving Chapter 8 for "assaults on an individual's body" (p. 223)—disease, trauma, and stress. Following some introductory comments on the process of differential diagnosis, Schwartz provides descriptions and photographic illustrations of infectious diseases, joint diseases, tumors, and fractures.

This text provides an unusually long section (18 pages) on nonmetric variation in the skull, postcranium and teeth. The traditional typological comparisons of skulls regarding shape and its relationship to "racial groups" are omitted. This section focuses on discrete traits which can be studied using population and clinical approaches to human variation. In my opinion, this is a wise decision which avoids the current debate in physical anthropology over race concepts. This is an introductory text and the question of whether single skulls can be assessed for "racial identification" and the utility of engag-

ing in such procedures is better left for advanced books in forensic anthropology, the specialty in which such applications are needed.

The appendices are extensive, covering synonymy and plurals in bone nomenclature, orientation and bone topography terms, siding procedures, osteometric landmarks, osteometry and comparative osteology. I found a few errors, such as in the definition of Frankfort Horizontal Plane where it is not made clear that *three* points are needed (right and left porion and left orbitale). I especially like the final appendix in which Schwartz compares skeletons of a human, deer, bear, and pig to "inspire curious osteolo-

gists to broaden their background and become more conversant in comparative mammalian osteology" (p. 1).

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RACE AND OTHER MISADVENTURES: ESSAYS IN HONOR OF ASHLEY MONTAGU IN HIS NINETIETH YEAR. Edited by Larry T. Reynolds and Leonard Lieberman. Dix Hills, New York: General Hall. 1996. 432 pp. ISBN 1-882289-35-8. \$65.95 (cloth).

Ashley Montagu embodied physical anthropology in its most progressive aspect for much of the reading public in the decades after the Second World War. His views on the human condition, most notably the empty significance of the biological race concept, the near-limitless plasticity of human behavior, and our evolutionary predisposition toward cooperation, resonated with the optimistically liberal intellectual perspective emerging in this period. While the accolades of his professional peers were long in arriving, recent efforts to honor his career achievements (including the AAPA's Charles Robert Darwin Lifetime Achievement Award) have led to the festschrift for which this edited volume is the published record. Reynolds and Lieberman have joined the efforts of 28 other scholars from a diversity of academic backgrounds—anthropology, sociology, psychology, history, medicine, philosophy, and paleontology—to produce a volume of expansive scope, an especially fitting tribute to a

colleague whose own work reached far into so many arenas.

Most of the book's 23 contributed papers address the major foci of Montagu's scholarly and popular productions: race and racism, the determinants and nature of human behavior, and sex and sexism. Following its brief biographical introduction, the volume is loosely divided into two parts, the first on race and the second covering all else. By the editors' account, the 11 chapters of the first part are intended to "complete" Montagu's critique of race, a presumptuous promise however one might read it. Still, even if reprinted from *Natural History*, Stephen Gould's "An Universal Freckle," on the monogenist Samuel Stanhope Smith's linkage of biological unity to his goal of social unity, is an apt introduction in light of Montagu's similar commitments. Several other papers also treat race in historical perspective, all showing race to have been a constructed category: a contingency of varied colonial sociopolitical attitudes (Gailey, Metress), a shifting outcome of ideological bias in American physical anthropology (Blakey), a negotiated formulation in the case of the UNESCO statements (Barkan). Blakey gives a particularly instructive exposition of the protracted contest between Hrdlicka and

Boas over the questions of race, and the apparent irrelevance of empirical findings to shaping its eventual outcome.

Loring Brace's lengthy chapter covers ground already quite familiar to biological anthropologists: traditional race groupings, clinical patterning of tooth size, sickle-cell and skin color variation, and so on. His contribution is distinctive for its proposal to substitute dendrogram "clusters" (not to be confused with ordinary cluster analysis) for traditional racial categories to describe human variation. It is interesting to compare Brace's trees obtained by UPGMA from his own craniometric sample with that similarly obtained by Relethford and Harpending (1994) from Howells' large data set: the topologies are inexplicably and fundamentally different, the former pairing European and Indian populations as the major outgroups, a position occupied by African populations in the latter's tree. In any case, I share Relethford and Harpending's discomfort with dendritic portrayals of human biological variability, partly because of the underlying branching (vs. gene flow) model upon which it is conventionally premised and partly because, as Relethford (1994) found, most of the species' variation lies within populations and is thus unrevealed by a tree structure. Relethford and Harpending's "model-free" alternatives seem more productive approaches to analyzing and expressing patterns of human interpopulation variation.

The editors' own chapter is notable for its curious sociological analysis disjunctively appended to their summary history of the race concept. Evaluating the results of their 1975 and 1985 surveys of attitudes on race (e.g., responses to the statement, "There are biological races within the species *Homo sapiens*"), they discover that biographical variables are major determinants of taxonomic proclivities. Thus "mainstream" [sic] biological anthropologists (who tended to be male, from southern or border states, with conservative Protestant or Catholic mothers and all grandparents born in the U.S. or Canada or North or West Europe, and first, last, or only children) were in 1975 more likely to support the race concept than their "marginal" [sic] counterparts (who tended to

be Jewish women of intermediate birth order, etc.), while in 1985 neither birthplaces of respondents and their grandparents, nor birth order, nor ethnicity seemed to matter much. The authors attribute this shift partly to growing social mobility: "Many persons of Jewish religion and/or ethnicity have reached upper-middle class status and have been accepted into dominant groups of European origin. . . ." (p. 159). Perhaps, it might be argued by extension, middle children have become beneficiaries of recently improved parenting skills. But how to explain the clear 1985 preference for racial taxonomies among the physical anthropologists they surveyed (50%) in comparison with their colleagues in cultural anthropology (30%)? One might suppose the authors' explication, "the rates of acceptance and rejection of the race concept vary not only with the degree of commitment of a discipline to biological theory . . . but also with the degree of familiarity with the debate over race and the clinical data, utility of the concept for that field, nature of the subject matter, research methods. . . ." (p. 159), merely to mean that racial taxonomies enjoy greater favor among those better-informed about biology, but apparently this is wrong. Instead they write that "[f]or physical anthropologists studying human hereditary variation, race has proven useless. . . ." (p. 166), a conclusion evidently exemplifying the obdurate power of preconception over observation.

Alan Goodman and George Armelagos take pessimistic stock of the current resurgence of the race concept (what they refer to as "racialism") in physical anthropology. (Their distinction between *racialism* and *racism* only invites confusion, the two terms being synonymous in British English and formerly so in our dialect.) They implicate prevailing practice in forensics and epidemiology in its reemergence, although without evidence for an expanded emphasis upon race in these fields I question whether this locates the roots of its revival. The Human Genome Diversity Project (HGDP) receives a pasting in passing, not for any perceived disposition to foster racial taxonomy, but for the "construct of human variation [DNA sequences] that the project might embody and reify, and the type of training and socialization that

the project will provide for young physical anthropologists" by diverting their attentions from "the complexities of human biology and of biocultural interaction" (p. 182). The remaining chapters in this first part all treat some contemporary aspect of race issues. Overcoming their initial hesitance to dignify crackpot science with a response, Weizmann and his colleagues offer a thoughtful and trenchant critique of Rushton's overtly racist Differential-K theory, while David and Collins, discussing pregnancy outcomes among African-Americans, make a persuasive case that biological conceptions of race in epidemiological studies have been emphasized to the detriment of understanding the clinical implications of the far-reaching and often subtle consequences of racism. Finally, John Moore asks if the HGDGP is inherently racist, a question which a cynic might suspect only to be rhetorical in light of his association with the Project. Thus, his answer, framed by the tautological methodology he finds in its linguistically oriented sampling design (biased to favor a migration theory of diversity), is somewhat unexpected: "not currently . . . but the data collected by the Project has the capability of being interpreted in a racist manner. Migration theory . . . is especially friendly to racist interpretations. It is not a long step from 'noting' the Indo-European expansion to 'explaining' it in terms of the genetic superiority of the conquerors" (p. 228).

Once beyond race, the book's second half is much less focused. Robin Fox contributes his literary gifts to what the editors term a "cautious yet creatively constructed rapprochement" (p. 230) between his and Montagu's divergent conceptions of human aggression. This is followed by an earnest proposal to pacify violence in New Zealand society (Ritchie and Ritchie) through curbing its sponsoring institutions (e.g., physical punishment of children, rugby, televised violence, pornography), then by a reanalysis of arguments (Power) for innate violence in chimpanzees (Goodall having ostensibly misinterpreted the frustration-induced aggression ensuing from a disruption of the artificial provisioning regimes at Gombe), and next by a consideration of the misapplication of the strict genetic canalization model

to animal behavior (Gottlieb), a model erroneously soliciting innatist interpretations. Concluding this subsection on human nature are chapters tying continued human survival to the founding of social networks which "must enhance the capacity and wish of everyone to confer survival benefits on everyone" (Gorney, p. 314) and criticizing Daniel Dennett's cognitivist view of the mind as complex automaton (Sheets-Johnstone). Although the latter chapter addresses a problem now receiving great attention in philosophy and is highly recommended to readers interested in the connection of neurophysiology to theories of mind, its relevance to the volume as a whole is not self-evident.

The subsection on sex and sexism is short. The author of its first chapter (Loye) plumbs Darwin and Paul MacLean (of the "triune brain") to decide that moral sensitivity is an evolved phenomenon flowing from our sexuality and that our goodness is truly innate. The next chapter (Lyons) gives an historical account of anthropology's varied engagements with human sexuality, positing that its current revival has been animated by the rise of feminism and the gay and lesbian movements. The section concludes with Riane Eisler summarizing her revisionist interpretation of Minoan civilization (peaceful and nurturing until the invasions of the woman-dominating Indo-European language speakers) and calling for a transformation of the present "dominator society" to a "partnership system" of gender equality.

Two of the book's most intellectually provocative chapters make up the final subsection, dubbed "Denouement" for lack of a more specific rubric. In the first, Marc Lange critically examines Montagu's position that answers to moral questions can be derived from scientific inquiry, contra Hume's assertion of the logical partition between *ought* and *is*. His dense and closely reasoned argument supports Montagu in cases where survival itself depends demonstrably upon the satisfaction of some social requirement (e.g., provision of parental love). In the second chapter, Kenneth Jacobs asks whether scientific ideas can any longer carry social danger, such that adherence to them constitutes moral irresponsibility, in a world deemed by

social constructivists to be an exclusive product of cognition. The problem, argues Jacobs, is that current critical perspectives dismiss the universality of criteria by which scientific truth-claims have been traditionally adjudicated; this leads to a void where moral claims superintend the scientific project, but cannot themselves be evaluated (as Ashley Montagu would have it) against any reference to an objective and external world.

As typical of festschrift collections, the quality of the contributions varies widely. Given Ashley Montagu's strong ideological commitments, there is a certain predictability to the collective viewpoint of the volume as a whole. Nevertheless, it contains a sufficiency of solid scholarship to guarantee something worthwhile for everyone of whatever

bent. The book is reasonably well produced, although it has its share of minor editorial lapses and typographical errors. If I could not afford to purchase a copy for myself, I would certainly encourage my library to acquire one. At the same time, at least 6 of its chapters have been published elsewhere in one form or another.

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